WHAT IS CLAIMED IS:

1.   A system for wavelet analysis of one or more signals to determine one or more characteristics of one or more anomalies in a wire, the system comprising:

a library of one or more reference wavelet analysis results that each
5   correspond to one or more known anomalies having one or more known characteristics; and

an analysis module operable to:

receive a first signal from a detector that has scanned a magnetic field from a wire comprising an anomaly, the first signal corresponding to a second
10   signal used to generate the magnetic field;

calculate a wavelet analysis result from a wavelet analysis of the first signal, the wavelet analysis result corresponding to the second signal;

access the library;

compare the wavelet analysis result with one or more reference
15   wavelet analysis results;

if the wavelet analysis result corresponds to one or more particular reference wavelet analysis results, indicate that the anomaly in the wire has one or more particular known characteristics of one or more particular known anomalies corresponding to the one or more particular reference wavelet
20   analysis results; and

if the wavelet analysis result does not correspond to one or more reference wavelet analysis results, indicate that the anomaly in the wire lacks one or more known characteristics of one or more known anomalies corresponding to one or more reference wavelet analysis results in the library.

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2.   The system of Claim 1, wherein the wavelet analysis result comprises a wavelet power spectrum of the first signal and the reference wavelet analysis results each comprise one or more reference wavelet power spectra.

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3.   The system of Claim 2, wherein a wavelet transform is used to calculate the wavelet power spectrum of the TDR signal.

4.   The system of Claim 1, wherein the second signal is a time domain reflectometry (TDR) signal.

5.   The system of Claim 1, wherein a location of the anomaly is determined according to the scan of the magnetic field from the wire.

6.   The system of Claim 1, wherein an integrated circuit (IC) package comprises the wire.

7.   A method for wavelet analysis of one or more signals to determine one or more characteristics of one or more anomalies in a wire, the method comprising:

receiving a first signal from a detector that has scanned a magnetic field from a wire comprising an anomaly, the first signal corresponding to a second signal used to generate the magnetic field;

calculating a wavelet analysis result from a wavelet analysis of the first signal, the wavelet analysis result corresponding to the second signal;

accessing a library of one or more reference wavelet analysis results that each correspond to one or more known anomalies having one or more known characteristics;

comparing the wavelet analysis result with one or more reference wavelet analysis results;

if the wavelet analysis result corresponds to one or more particular reference wavelet analysis results, indicating that the anomaly in the wire has one or more particular known characteristics of one or more particular known anomalies corresponding to the one or more particular reference wavelet analysis results; and

if the wavelet analysis result does not correspond to one or more reference wavelet analysis results, indicating that the anomaly in the wire lacks one or more known characteristics of one or more known anomalies corresponding to one or more reference wavelet analysis results in the library.

8.   The method of Claim 7, wherein the wavelet analysis result comprises a wavelet power spectrum of the first signal and the reference wavelet analysis results each comprise one or more reference wavelet power spectra.

9.   The method of Claim 8, wherein a wavelet transform is used to calculate the wavelet power spectrum of the TDR signal.

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10.   The method of Claim 7, wherein the second signal is a time domain reflectometry (TDR) signal.

11.   The method of Claim 7, wherein a location of the anomaly is determined according to the scan of the magnetic field from the wire.

12.   The method of Claim 7, wherein an integrated circuit (IC) package comprises the wire.

13.   Software for wavelet analysis of one or more signals to determine one or more characteristics of one or more anomalies in a wire, the software embodied in computer-readable media and when executed operable to:

receive a first signal from a detector that has scanned a magnetic field from a wire comprising an anomaly, the first signal corresponding to a second signal used to generate the magnetic field;

calculate a wavelet analysis result from a wavelet analysis of the first signal, the wavelet analysis result corresponding to the second signal;

access a library of one or more reference wavelet analysis results that each correspond to one or more known anomalies having one or more known characteristics;

compare the wavelet analysis result with one or more reference wavelet analysis results;

if the wavelet analysis result corresponds to one or more particular reference wavelet analysis results, indicate that the anomaly in the wire has one or more particular known characteristics of one or more particular known anomalies corresponding to the one or more particular reference wavelet analysis results; and

if the wavelet analysis result does not correspond to one or more reference wavelet analysis results, indicate that the anomaly in the wire lacks one or more known characteristics of one or more known anomalies corresponding to one or more reference wavelet analysis results in the library.

14.   The software of Claim 13, wherein the wavelet analysis result comprises a wavelet power spectrum of the first signal and the reference wavelet analysis results each comprise one or more reference wavelet power spectra.

15.   The software of Claim 14, wherein a wavelet transform is used to calculate the wavelet power spectrum of the TDR signal.

16.   The software of Claim 13, wherein the second signal is a time domain reflectometry (TDR) signal.

17.   The software of Claim 13, wherein a location of the anomaly is determined according to the scan of the magnetic field from the wire.

18.   The software of Claim 13, wherein an integrated circuit (IC) package comprises the wire.

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19.   A system for wavelet analysis of one or more signals to determine one or more characteristics of one or more anomalies in a wire, the system comprising:

means for receiving a first signal from a detector that has scanned a magnetic field from a wire comprising an anomaly, the first signal corresponding to a second

5   signal used to generate the magnetic field;

means for calculating a wavelet analysis result from a wavelet analysis of the first signal, the wavelet analysis result corresponding to the second signal;

means for accessing a library of one or more reference wavelet analysis results that each correspond to one or more known anomalies having one or more known

10   characteristics;

means for comparing the wavelet analysis result with one or more reference wavelet analysis results;

means for, if the wavelet analysis result corresponds to one or more particular reference wavelet analysis results, indicating that the anomaly in the wire has one or

15   more particular known characteristics of one or more particular known anomalies corresponding to the one or more particular reference wavelet analysis results; and

means for, if the wavelet analysis result does not correspond to one or more reference wavelet analysis results, indicating that the anomaly in the wire lacks one or more known characteristics of one or more known anomalies corresponding to one or

20   more reference wavelet analysis results in the library.

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20.   A system for wavelet analysis of one or more signals to determine one or more characteristics of one or more anomalies in a wire, the system comprising:

a library of one or more reference wavelet power spectra that each correspond to one or more known anomalies having one or more known characteristics; and

5   an analysis module operable to:

receive a first signal from a detector that has scanned a magnetic field from a wire comprising an anomaly, the first signal corresponding to a second signal used to generate the magnetic field, the second signal being a time domain reflectometry (TDR) signal;

10   calculate a wavelet power spectrum of the first signal, the wavelet power spectrum corresponding to the second signal;

access the library;

compare the wavelet power spectrum with one or more reference wavelet power spectra;

15   if the wavelet power spectrum corresponds to one or more particular reference wavelet power spectra, indicate that the anomaly in the wire has one or more particular known characteristics of one or more particular known anomalies corresponding to the one or more particular reference wavelet power spectra; and

20   if the wavelet analysis result does not correspond to one or more reference wavelet power spectra, indicate that the anomaly in the wire lacks one or more known characteristics of one or more known anomalies corresponding to one or more reference wavelet power spectra in the library.